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10/701,997

11/05/2003

Arnett R. Weber

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EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT

PAPER NUMBER

3683

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/701,997  
Filing Date: November 05, 2003  
Appellant(s): WEBER, ARNETT R.

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Theodore W. Olds  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 17, 2005.

**(1) Real Party in Interest**

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Art Unit: 3683

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Claimed Subject Matter***

The summary of the claimed subject matter contained in the brief is correct.

**(6) *Grounds of Rejection to be Reviewed on Appeal***

The Brief contains a concise statement for the ground(s) of rejection presented for review, but presents it in the Argument section.

**(7) *Argument***

The Brief contains an argument with respect to each ground of rejection presented for review.

**(8) *Claims Appendix***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Evidence Appendix**

The Brief does not contain an evidence appendix since no evidence was submitted pursuant to 37 C.F.R. 1.130-1.132.

**(10) Prior Art of Record**

The prior art of record newly cited has been cited for showing the state of the prior art in the way of actively controlled suspension systems using air springs and temperature controlled valves (see valve of Dodson et al.).

**(11) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison in view of Sakai et al.

Harrison discloses a leveling system for a vehicle which is able to compensate for changes in temperature using the valves at 25 and 28. See column 1 lines 35-67 and column 2 lines 17-25. Note also the absorber/spring at 21.

Harrison lacks the specifics of the shock absorber/air spring combination.

Art Unit: 3683

Sakai et al. is relied upon to show a known general type semi-active type of absorber -spring combination in the several embodiments that can be adjusted dependent upon the "status of the vehicle".

One having ordinary skill in the art at the time of the invention would have found it obvious to have utilized an absorber/spring combination in the system of Harrison as taught by Sakai et al. so that the damping and leveling characteristics of the system may be readily adjusted.

As discussed in the Harrison patent a number of options are provided for compensating for temperature rises which in turn lead to excessive pressure build up in the system. Temperature rises within the reservoirs can cause the air within to be blown off into the atmosphere through the dump or relief valves, dependent upon which option is used (see the discussion in column 3). See column 2 lines 13-24 and column 3 lines 15-19. Note that cooler atmospheric air may be introduced into the system, even if in small amounts. But it seems this amount will depend upon which optional arrangement discussed in column 3 is utilized.

Claims 2-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison in view of Sakai et al. as applied to claim 1 above, and further in view of Chamberlin et al.

Regarding claim 2 Harrison as modified lacks a specific showing of a temperature responsive valve that opens to allow air to leave the air spring upon reaching a predetermined temperature.

However such valves are notoriously well known in the art to compensate for temperature changes and therefor the ride and/or handling characteristics of the vehicle. Chamberlin et al. is relied upon to provide this known teaching in column 1, in light of an understanding of Charles' law.

Accordingly one having ordinary skill in the art at the time of the invention would have found it obvious to have used temperature sensitive valving in the system of Harrison, at 25,28,18 or 22, as modified to adjust the ride and/or handling characteristics upon a predetermined temperature change in the air/gas pressure in the air chamber.

Regarding claim 3 although the valves of Harrison are pressure sensitive valves, temperature sensitive valves could be employed simply as an alternative equivalent. Note the "cooler" air could come from the atmosphere (even if in small amounts) but also from the low pressure reservoir. The leveling valve could be that at 18, as broadly claimed.

The limitations of claim 4 would simply amount to alternate equivalent choice of design that is known in the art.

Regarding claim 5 in view of the discussion above, these requirements are considered to be met.

### ***Response to Argument***

In claim 1 applicants merely claim "a control for avoiding an undesirably high temperature within the air volume by replacing hotter air with cooler air", a statement of

Art Unit: 3683

intended use. The device of Harrison, as modified by Sakai et al., is capable of functioning in the claimed manner.

Appellant's argue "All of this misses the point [in] that Harrison's valve is in an air reservoir, not a suspension component".

First, claim 1 calls for "An air spring and shock absorber *module*". The rejection is Harrison in view of Sakai et al. As broadly claimed, Harrison in view of Sakai et al. discloses just that—An air spring and shock absorber module. There is no limitation in the claim that requires "the control" to be incorporated within the air spring/shock absorber, if appellant's argument is understood correctly.

Second, contrary to appellant's argument, Harrison's valve is indeed within "a suspension component". Either of the reservoirs containing the valves 25 or 28 certainly qualify as being a "suspension component".

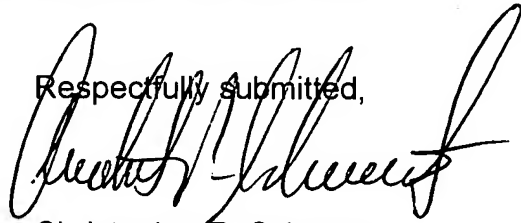
Appellant's arguments with respect to the functioning of the valves 25,28 and check valves 18 and 22 have been noted. However, the examiner considers these arguments to be largely "condition specific" and interpreted too narrowly because the valves are in fact capable of functioning as appellant has broadly claimed. Upon excessive temperatures, and therefore pressure within a specific chamber, air flows from the source of higher pressure to lower pressure. So lower pressure cooler air from the low pressure reservoir through the high pressure reservoir is certainly capable of entering the air spring, as modified. Air under excessively high pressure or temperature is capable of flowing from the air spring back to the low pressure reservoir, while cooler air can enter through the high pressure reservoir. Notwithstanding this argument, it

Art Unit: 3683

should be readily apparent the ordinary skilled worker in the art would have found it obvious to have regulated or changed the pressure(s) within the system to desired levels based upon predetermined conditions, such as vehicle ride or handling characteristics, vehicle handling characteristics under excessive loading, and driver preference. Such may be accomplished with the known actively controlled suspension systems (hinted at in Sakai et al. in col. 1) that are controlled by way of the vehicle driver through a switch in the vehicle cabin. This may be alternatively accomplished, indirectly, simply through the alternate selection and/or replacement of valves 18,22,25,28..

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Christopher P. Schwartz

cps

May 27, 2005

Conferees

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Application/Control Number: 10/701,997

Art Unit: 3683

Page 8